

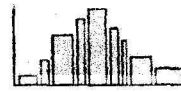
A Types of diagrams



pie chart



bar chart



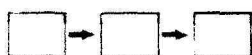
histogram

| Number | Amount |
|--------|--------|
| 1 | 10 |
| 2 | 5 |

table



cross-section

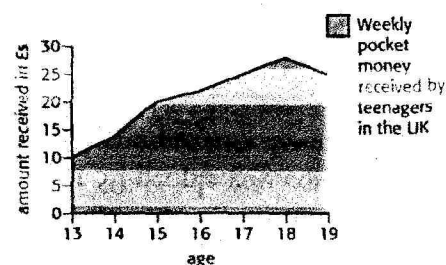


flowchart

Diagrams are visual ways of presenting data concisely. They are often also called **figures**. In an academic article they are usually labelled Fig. (Figure) 1, Fig. 2, etc. A **pie chart** is a circle divided into segments from the middle (like slices of a cake) to show how the total is divided up. A **key** or **legend** shows what each segment represents. A **bar chart** is a diagram in which different amounts are represented by thin vertical or horizontal bars which have the same width but vary in height or length. A **histogram** is a kind of bar chart but the bar width also varies to indicate different values. A **table** is a grid with columns and rows of numbers. A **cross-section** is something, or a model of something, cut across the middle so that you can see the inside. A cross-section of the earth's crust, for example, shows the different layers that make it up. A label gives the name of each part of the cross-section. Cross-section can also be used to mean a small group that is representative of all the different types within the total group (e.g. *the survey looked at a cross-section of society*). A **flowchart** is a diagram which indicates the stages of a process.

B A graph

The graph presents data relating to teenagers and pocket money. A random sample of 1,000 teenagers were surveyed and the average pocket money received at each age has been plotted on the graph. The x axis or horizontal axis indicates age and the y axis or vertical axis shows the amount of money received per week. The graph shows that 15-year-olds receive twice as much pocket money as 13-year-olds. From the graph we can see that the amount received reaches a peak at the age of 18 and then starts to decline. This decline can perhaps be explained by the fact that many teenagers start earning and stop receiving pocket money at the age of 18.



Graphs are drawn by **plotting** points on them and then drawing a line to join **adjacent** points. If there are two lines on a graph – separate lines, for example, to indicate boys' and girls' pocket money – then the lines would probably cross or **intersect** at various points. Lines that **run parallel** to one another never intersect.

Graphs show how numbers increase or decrease. The nouns **increase** and **decrease** have the stress on the first syllable, but the verbs have the stress on the second syllable. Numbers can also be said to **rise** or **grow** and **fall**, **drop** or **decline**. The nouns **rise**, **growth**, **fall**, **drop** and **decline**, like **increase** and **decrease** are followed by **in** (to explain what is rising) or **of** (to explain the size of the change), e.g. *a rise of 10% in the number of cars*. Other verbs used about growth include **double**¹, **soar**², **multiply**³, **appreciate**⁴ and **exceed**⁵.

¹ grow to twice the size; opposite = halve ² (dramatic word) rapid movement upwards; opposite = plummet ³ grow rapidly to a very large number ⁴ used about the value of something, e.g. a painting or car; opposite = depreciate ⁵ go over, expresses a number in relation to another number; opposite = fall below



Note that **graph** is a noun and **graphic** [relating to drawing: vivid, especially when describing something unpleasant] is usually an adjective. *The economics textbook contains a lot of fascinating graphs. My nephew studied graphic design. The book contains some very graphic descriptions of the massacre. Graphics can be used as a plural noun to refer to pictorial material, e.g. The graphics in that computer game are brilliant.*